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EXAMINER

THANGAVELU, KANDASAMY

ART UNIT	PAPER NUMBER
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2123

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/715,239

Applicant(s)

WARLOCK, ARWEN

Examiner

Kandasamy Thangavelu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-14,19-26,28-33,38-45,47-52,57-63,65 and 66 is/are rejected.
- 7) ☒ Claim(s) 8,15-18,27,34-37,46,53-56 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-66 of the application have been examined.

Drawings

2. In Figure 22 of the drawings, in Block 426, "input ports" appears to be incorrect and it appears that it should be "output ports".

Specification

3. The disclosure is objected to because of the following informalities:

Page 16, Lines 25-26, "an output and Derivative method are needed" appears to be incorrect and it appears that it should be "output and Derivative methods are needed".

Page 39 Line 7, "such at time taken to execute" appears to be incorrect and it appears that it should be "such as time taken to execute".

Page 46, Line 28, "computer executable steps" appears to be incorrect and it appears that it should be "computer executable instructions".

Appropriate corrections are required.

Claim Objections

4. The following is a quotation of 37 C.F.R § 1.75 (d)(1):

The claim or claims must conform to the invention as set forth in the remainder of the specification and terms and phrases in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

5. Claim 61 is objected to because of the following informalities:

Claim 61, Lines 3-4, "selecting individual of the plurality of components that match the selected patterns" appears to be incorrect and it appears that it should be "selecting individual of the plurality of components that matches the selected patterns".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-66 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- 7.1 Claim 1 states, "In an electronic device, a method of altering a graphical model, comprising:

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identifying a component ...; and
processing the component to identify one of similarities ..., and automatically converting the component into a reference”.

The claim involves a method of altering a graphical model. The method does not produce any useful, tangible and concrete results and therefore is not statutory and cannot be patented under 35 USC 101. To produce useful, tangible and credible results, the system should display some results on a display terminal or save the results in a file for use in analysis and design.

Claims 2-19 depend on claim 1 but do not produce any useful, tangible and concrete results and therefore are not statutory and cannot be patented under 35 USC 101.

7.2 Claim 20 states, “A system for altering a graphical model, the system comprising:
an identifier for identifying a component ...; and
a converter for processing the component to identify one of similarities ..., and
automatically converting the component into a reference”.

The claim involves altering a graphical model. The system does not produce any useful, tangible and concrete results and therefore is not statutory and cannot be patented under 35 USC 101. To produce useful, tangible and credible results, the method should display some of the results on a display terminal or save the results in a file for use in analysis and design.

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In addition, the system as claimed comprises only software. If all parts of a system are software, then the system becomes functional descriptive material and is not statutory and cannot be patented under 35 USC 101. The system should include some hardware elements to be statutory and patentable.

Claims 21-38 depend on claim 20 but do not produce any useful, tangible and concrete results and therefore are not statutory and cannot be patented under 35 USC 101.

7.3 Claim 39 states, "A medium holding computer executable steps for carrying out a method of altering a graphical model, the method comprising:

identifying a component ...; and

processing the component to identify one of similarities ..., and automatically converting the component into a reference".

The medium does not produce any useful, tangible and concrete results and therefore is not statutory and cannot be patented under 35 USC 101. To produce useful, tangible and credible results, the medium should include instructions that display some of the results on a display terminal or save the results in a file for use in analysis and design.

In addition, the medium could be any medium including the network and paper medium. Because of this, the claim is not patentable under 35 USC 101. Only computer readable storage or recording medium holding computer executable instructions is patentable.

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Claims 40-57 depend on claim 39 but do not produce any useful, tangible and concrete results and therefore are not statutory and cannot be patented under 35 USC 101. In addition, a medium with instructions is not patentable, unless the medium is limited to computer readable storage or recording medium.

7.4 Claim 58 states, "In an electronic device, a method of simplifying a model, comprising:
providing a plurality of components forming the model;
identifying repeating occurrences of a pattern among the plurality of components;
creating a new model based on the pattern;
replacing each of the repeating occurrences of the pattern with a reference to the new model".

The claim involves a method of simplifying a model. The method does not produce any useful, tangible and concrete results and therefore is not statutory and cannot be patented under 35 USC 101. To produce useful, tangible and credible results, the system should display some results on a display terminal or save the results in a file for use in analysis and design.

Claims 59-66 depend on claim 1 but do not produce any useful, tangible and concrete results and therefore are not statutory and cannot be patented under 35 USC 101.

Claim Rejections - 35 USC § 103

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8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-4, 6, 20-23, 25, 39-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586).

10.1 **Frank et al.** teaches Component model for real time system control. Specifically, as per claim 20, **Frank et al.** teaches system for altering a graphical model (Page 1, Para 0002, L15-22; Page 2, Para 0019, L1-5; Page 5, Para 0062), the system comprising:

an identifier for identifying a component of the graphical model for conversion (Page 1, Para 0002, L15-22; Page 1, Para 0003, L1-5; Page 2, Para 0019, L1-15 Page 3, Para 0030, L7-9; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062); and

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a converter for automatically converting the component into a reference (Page 2, Para 0019, L1-5; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062).

Frank et al. does not expressly teach a converter for processing the component to identify one of similarities with other components and similarities with selected characteristics. **Sakai** teaches a converter for processing the component to identify one of similarities with other components and similarities with selected characteristics (CL27, L17-19; CL27, L49-62). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **Frank et al.** with the system of **Sakai** that included a converter for processing the component to identify one of similarities with other components and similarities with selected characteristics, because that would allow distributing design and manufacturing information throughout a factory to facilitate production of components using electronically stored job sheet that can be accessed instantly from any location from the factory (Abstract, L2-12); so that previous job information relating to similar part can be used to reduce overall manufacturing time of future jobs (CL4, L38-40).

Per Claim 21: **Frank et al.** teaches that the component comprises at least one of a system, a subsystem, a portion of a system, and a portion of a subsystem disposed within the graphical model ((Page 1, Para 0002, L15-22; Page 1, Para 0003, L1-5; Page 5, Para 0061, L1-2; Page 5, Para 0062).

Per claim 22: **Frank et al.** teaches that the graphical model comprises a plurality of components (Page 1, Para 0005).

Per claim 23: **Frank et al.** teaches identifying the component comprises heuristically locating a re-usable pattern and selecting the component to represent the re-usable pattern (Page 1, Para 0005).

Per claim 25: **Frank et al.** teaches that the identifier heuristically locates a specific type of component and selects the component that matches the specific type (Page 1, Para 0005, L1-3 and L10-13).

10.2 As per Claims 1-4, 6, 39-42 and 44, these are rejected based on the same reasoning as Claims 20-23 and 25, supra. Claims 1-4, 6, 39-42 and 44 are method and medium claims reciting the same limitations as Claims 20-23 and 25, as taught throughout by **Frank et al.** and **Sakai**.

11. Claims 5, 24 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586), and further in view of **Georges et al.** (U.S. Patent Application 2004/0089141).

11.1 As per claim 24, **Frank et al.** and **Sakai** teach the system of claim 20. **Frank et al.** and **Sakai** do not expressly teach that the identifier utilizes a checksum to identify selected patterns and selecting the component that matches the selected patterns. **Georges et al.** teaches that the identifier utilizes a checksum to identify selected patterns and selecting the component that matches the selected patterns (Abstract, L6-12; Page 3, Para 0027, L2-6; Page 3, Para 0030; Page

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3, Para 0029, L13-15; Page 14, Para 0164, L1-7; Page 42, Para 0411, L2-3 and Para 0416, L1-2).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **Frank et al.** and **Sakai** with the system of **Georges et al.** that included the identifier utilizing a checksum to identify selected patterns and selecting the component that matches the selected patterns, because that would allow a user to select and modify components to modify the graphics displayed on the display (Page 3, Para 0029, L13-15), allowing the user to visualize the various components of system (Page 3, Para 0030, L5-6); and use the checksum to protect the files against read/write errors (Page 42, Para 0416, L1-2).

11.2 As per Claims 5 and 43, these are rejected based on the same reasoning as Claim 24, supra. Claims 5 and 43 are method and medium claims reciting the same limitations as Claim 24, as taught throughout by **Frank et al.**, **Sakai** and **Georges et al.**

12. Claims 7, 26 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586), and further in view of **Provan et al.** (U.S. Patent 6,208,955).

12.1 As per claim 26, **Frank et al.** and **Sakai** teach the system of claim 20. **Frank et al.** and **Sakai** do not expressly teach that the identifier locates a selected acyclic graph of blocks and selects the component that contains the selected acyclic graph of blocks. **Provan et al.** teaches that the identifier locates a selected acyclic graph of blocks and selects the component that contains the selected acyclic graph of blocks (CL3, L18-31; CL3, L32-47). It would have been

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obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **Frank et al.** and **Sakai** with the system of **Provan et al.** that included the identifier locating a selected acyclic graph of blocks and selects the component that contains the selected acyclic graph of blocks, because that would allow identification of faulty components graphically in the event of fault in the system (CL3, L51-53).

12.2 As per Claims 7 and 45, these are rejected based on the same reasoning as Claim 26, supra. Claims 7 and 45 are method and medium claims reciting the same limitations as Claim 26, as taught throughout by **Frank et al.**, **Sakai** and **Provan et al.**

13. Claims 9, 28 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586), and further in view of **Kodosky et al.** (U.S. Patent Application 2002/0080174).

13.1 As per claim 28, **Frank et al.** and **Sakai** teach the system of claim 20. **Frank et al.** teaches that the identifier solicits user interaction to participate in a selection of components based on at least one of re-usability, and polymorphism characteristics (Page 1, Para 0005; Page 2, Para 0020, L7-13; Page 3, Para 0040, L7-12; Page 4, Para 0050).

Frank et al. and **Sakai** do not expressly teach that the identifier solicits user interaction to participate in a selection of components based on at least one of pattern matching. **Kodosky et al.** teaches that the identifier solicits user interaction to participate in a selection of components

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based on at least one of pattern matching (Page 9, Para 0123; Page 9, Para 0127, L5-7; Para 0126, L8-11). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **Frank et al.** and **Sakai** with the system of **Kodosky et al.** that included the identifier soliciting user interaction to participate in a selection of components based on at least one of pattern matching, because that would allow using the graphical programming system to develop a graphical program that implements image processing routine (Page 9, Para 0127, L5-7); the graphical programming would allow a user to construct a diagram using a block diagram editor; the diagram created graphically would display a method of accomplishing a certain result (Page 1, Para 0009, L1-7); and the graphical programming would provide the user maximum amount of flexibility to create his own applications (Page 2, Para 0015, L1-4).

13.2 As per Claims 9 and 47, these are rejected based on the same reasoning as Claim 28, supra. Claims 9 and 47 are method and medium claims reciting the same limitations as Claim 28, as taught throughout by **Frank et al.**, **Sakai** and **Kodosky et al.**

14. Claims 10, 12-14, 29, 31-33, 48 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586), and further in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015).

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14.1 As per claim 29, **Frank et al.** and **Sakai** teach the system of claim 20. **Frank et al.** and **Sakai** do not expressly teach that the converter creates a new model and copies the component into the new model. **Ben-Romdhane et al.** teaches that the converter creates a new model and copies the component into the new model (Abstract; Page 1-2, Para 0018; Page 4, Para 0066, L1-5; Page 6, Para 0091, L11 to Para 0092, L5; Page 11, Para 0155, L1-9; Para 0156, L1-11). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **Frank et al.** and **Sakai** with the system of **Ben-Romdhane et al.** that included the converter creating a new model and copying the component into the new model, because that would allow modeling using component reuse (Page 1, Para 0013); visualizing the model graphically showing data dependencies, functional dependencies and control flows (Page 1, Para 0015); allow the designer to quickly understand the inner workings of the software program (Page 1, Para 0016); and allow software reuse by identifying the inherent software components and extracting interfaces to those components (Page 1, Para 0017).

14.2 As per claims 31-32, **Frank et al.**, **Sakai** and **Ben-Romdhane et al.** teach the system of claim 28. **Frank et al.** and **Sakai** do not expressly teach that the converter copies a configuration set from the component into the new model; and the configuration set comprises model peripheral information. **Ben-Romdhane et al.** teaches that the converter copies a configuration set from the component into the new model; and the configuration set comprises model peripheral information (Abstract; Page 1-2, Para 0018; Page 4, Para 0066, L1-5; Page 6, Para 0091, L11 to Para 0092, L5; Page 11, Para 0155, L1-9; Para 0156, L1-11).

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Per claim 33: **Frank et al.** teaches that the converter replaces the other components with references to the new model (Page 2, Para 0019, L1-5; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062).

14.3 As per Claims 10, 12-14, 48 and 50-52, these are rejected based on the same reasoning as Claims 29 and 31-33, supra. Claims 10, 12-14, 48 and 50-52 are method and medium claims reciting the same limitations as Claims 29 and 31-33, as taught throughout by **Frank et al.**, **Sakai** and **Ben-Romdhane et al.**

15. Claims 11, 30 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586), and further in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015) and **Kodosky et al.** (U.S. Patent Application 2002/0080174).

15.1 As per claim 30, **Frank et al.**, **Sakai** and **Ben-Romdhane et al.** teach the system of claim 28. **Frank et al.**, **Sakai** and **Ben-Romdhane et al.** do not expressly teach that the converter sets compiled properties to be fixed into input and output ports. **Kodosky et al.** teaches that the converter sets compiled properties to be fixed into input and output ports (Page 20, Para 0265, L7-11; Page 28, Para 0389, L2-4; Page 19, Para 0255, L1-9).

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15.2 As per Claims 11 and 49, these are rejected based on the same reasoning as Claim 30, supra. Claims 11 and 49 are method and medium claims reciting the same limitations as Claims 28, as taught throughout by **Frank et al.**, **Sakai**, **Ben-Romdhane et al.** and **Kodosky et al.**

16. Claims 19, 38 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Sakai** (U.S. Patent 6,219,586), and further in view of **Bjornson et al.** (U.S. Patent Application 2004/0056908).

16.1 As per claim 38, **Frank et al.** and **Sakai** teach the system of claim 20. **Frank et al.** teaches that the reference comprises at least one of a model reference (Page 2, Para 0019, L1-5; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062).

Frank et al. and **Sakai** do not expressly teach that the reference comprises at least one of a library reference. **Bjornson et al.** teaches that the reference comprises at least one of a library reference (Abstract, L1-13; Page 2, Para 0013, L1-21; Page 4, Para 0029, L16-21; Page 5, Para 0034, L11-16; Page 7, Para 0046). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **Frank et al.** with the system of **Bjornson et al.** that included the reference comprising at least one of a library reference, because that would allow a user to visually create the computer dataflow on a user display by selecting from a library of components (Abstract, L5-9); and automatically executing the dataflow with minimum number of inputs from the user (Abstract, L15-16).

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16.2 As per Claims 19 and 57, these are rejected based on the same reasoning as Claim 38, supra. Claims 19 and 57 are method and medium claims reciting the same limitations as Claim 38, as taught throughout by **Frank et al.**, **Sakai**, and **Bjornson et al.**

17. Claims 58-60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015).

17.1 As per claim 58, **Frank et al.** teaches in an electronic device, a method of simplifying a model (Page 1, Para 0002, L15-22; Page 2, Para 0019, L1-5; Page 5, Para 0062), comprising:

providing a plurality of components forming the model (Page 1, Para 0002, L15-22; Page 1, Para 0003, L1-5; Page 2, Para 0019, L1-15 Page 3, Para 0030, L7-9; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062); and

identifying repeating occurrences of a pattern among the plurality of components Page 1, Para 0005);

replacing each of the repeating occurrences of the pattern with a reference to the new model (Page 2, Para 0019, L1-5; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062).

Frank et al. does not expressly teach that the converter creates a new model and copies the component into the new model. **Ben-Romdhane et al.** teaches that the converter creates a new model and copies the component into the new model (Abstract; Page 1-2, Para 0018; Page

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4, Para 0066, L1-5; Page 6, Para 0091, L11 to Para 0092, L5; Page 11, Para 0155, L1-9; Para 0156, L1-11).

Per Claim 59: **Frank et al.** teaches that each of the plurality of components comprises at least one of a system, a subsystem, a portion of a system, and a portion of a subsystem disposed within the graphical model ((Page 1, Para 0002, L15-22; Page 1, Para 0003, L1-5; Page 5, Para 0061, L1-2; Page 5, Para 0062).

Per claim 60: **Frank et al.** teaches that identifying repeating occurrences of the pattern comprises heuristically locating a re-usable pattern amongst the plurality of components and selecting one of the plurality of components to represent the re-usable pattern (Page 1, Para 0005).

Per claim 62: **Frank et al.** teaches identifying the repeating occurrences of the pattern comprises heuristically locating a specific type of component amongst the plurality of components and selecting one of the plurality of components that matches the specific type (Page 1, Para 0005, L1-3 and L10-13).

18. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015), and further in view of **Georges et al.** (U.S. Patent Application 2004/0089141).

18.1 As per claim 61, **Frank et al.** and **Ben-Romdhane et al.** teach the method of claim 58.

Frank et al. and **Ben-Romdhane et al.** do not expressly teach identifying the repeating occurrences of the pattern comprises utilizing a checksum to identify selected patterns amongst the plurality of components and selecting individual of the plurality of components that match the selected patterns. **Georges et al.** teaches identifying the repeating occurrences of the pattern comprises utilizing a checksum to identify selected patterns amongst the plurality of components and selecting individual of the plurality of components that match the selected patterns (Abstract, L6-12; Page 3, Para 0027, L2-6; Page 3, Para 0030; Page 3, Para 0029, L13-15; Page 14, Para 0164, L1-7; Page 42, Para 0411, L2-3 and Para 0416, L1-2).

19. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015), and further in view of **Provan et al.** (U.S. Patent 6,208,955).

19.1 As per claim 63, **Frank et al.** and **Ben-Romdhane et al.** teach the method of claim 58.

Frank et al. and **Ben-Romdhane et al.** do not expressly teach identifying the repeating occurrences of the pattern comprises locating a selected acyclic graph of blocks amongst the plurality of components and selecting one of the plurality of components that contains the selected acyclic graph of blocks. **Provan et al.** teaches identifying the repeating occurrences of the pattern comprises locating a selected acyclic graph of blocks amongst the plurality of

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components and selecting one of the plurality of components that contains the selected acyclic graph of blocks (CL3, L18-31; CL3, L32-47).

20. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015), and further in view of **Kodosky et al.** (U.S. Patent Application 2002/0080174).

20.1 As per claim 65, **Frank et al.** and **Ben-Romdhane et al.** teach the method of claim 58. **Frank et al.** teaches identifying the repeating occurrences of the pattern comprises soliciting user interaction to participate in a selection of components based on at least one of re-usability, and polymorphism characteristics (Page 1, Para 0005; Page 2, Para 0020, L7-13; Page 3, Para 0040, L7-12; Page 4, Para 0050).

Frank et al. and **Ben-Romdhane et al.** do not expressly teach identifying the repeating occurrences of the pattern comprises soliciting user interaction to participate in a selection of components based on at least one of pattern matching. **Kodosky et al.** teaches identifying the repeating occurrences of the pattern comprises soliciting user interaction to participate in a selection of components based on at least one of pattern matching (Page 9, Para 0123; Page 9, Para 0127, L5-7; Para 0126, L8-11).

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21. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Frank et al.** (U.S. Patent Application 2003/0159129) in view of **Ben-Romdhane et al.** (U.S. Patent Application 2004/0031015), and further in view of **Bjornson et al.** (U.S. Patent Application 2004/0056908).

21.1 As per claim 66, **Frank et al.** and **Ben-Romdhane et al.** teach the method of claim 58. **Frank et al.** teaches that the reference comprises at least one of a model reference (Page 2, Para 0019, L1-5; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062).

Frank et al. and **Ben-Romdhane et al.** do not expressly teach that the reference comprises at least one of a library reference. **Bjornson et al.** teaches that the reference comprises at least one of a library reference (Abstract, L1-13; Page 2, Para 0013, L1-21; Page 4, Para 0029, L16-21; Page 5, Para 0034, L11-16; Page 7, Para 0046).

Allowable Subject Matter

22. Claims 8, 15-18, 27, 34-37, 46, 53-56 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

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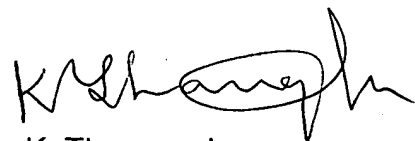
23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez, can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

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K. Thangavelu
Art Unit 2123
March 2, 2007